Claims

1. A product for vaccinating an animal or a human to obtain therein an immune response against at least one antigen of a virus causing a temporary, or long lasting immune impairment, comprising at least two different vaccine compositions for sequential administration to said animal or said human, each containing at least said antigen or a precursor thereof, wherein at least two of said vaccine compositions differ from each other by the presence therein of a different vector.

2. A product for vaccinating an animal or a human to obtain therein an immune response against an antigen comprising at least two different vaccine compositions for sequential administration to said animal or said human, each containing at least said antigen or a precursor thereof, wherein at least two of said vaccine compositions differ from each other by the presence therein of a different vector

3. A product according to claim 1 or claim 2, wherein at least part of, said vector or a product thereof, functions as an adjuvant.

4. A product according to claim 3, wherein said adjuvant function directs the immune response toward a more T helper 1 type or a more T helper 2 type of response or both.

5. A product according to anyone of claims 1-4, wherein at least one of said compositions comprises as an antigen precursor a nucleic acid encoding at least one proteinaceous molecule for inducing and/or boosting an immune response against said antigen.

6. A product according to claim 5, wherein said proteinaceous molecule comprises said antigen, or an immunogenic part, derivative or analogue thereof.

7. A product according to anyone of claims 1-6, wherein said antigen is a part of or encoded by a virus, preferably a lentivirus or a hepatitis C virus.

8. A product according to anyone of claims 1-7, wherein said antigen comprises at least an immunogenic part, derivative and/or analogue of a lentivirus *gag*, *pol*, *rev*, *tat*, *nef* or *env* protein or a combination thereof.

9. A product according to anyone of claims 5-8, wherein a vector comprises a nucleic acid which encodes at least one proteinaceous molecule capable of modulating an immune response.

10. A product according to claim 9, wherein said proteinaceous molecule capable of modulating an immune response is a co-stimulatory protein, an immune response inhibitory protein, an interleukin, a major histocompatibility complex protein or a functional part, derivative and/or analogue thereof.

11. A product according to anyone of claims 5-10, wherein said vector is nucleic acid delivery vehicle comprising said nucleic acid.

12. A product according to anyone of claims 5-11, wherein said nucleic acid comprises nucleic acid of a Semliki Forest Virus, a poxvirus, a herpes virus and/or an adenovirus.

13. A product according to claim 11 or claim 12, wherein said nucleic acid delivery vehicle is a Semliki Forest Virus particle, a pox virus particle, a herpes virus particle or an adenovirus particle.

14. A method for vaccinating an animal to obtain therein an immune response against at least one antigen, comprising administering sequentially to said animal, at least two different vaccine compositions, each containing at least said antigen or a precursor thereof and wherein at least two of said vaccine compositions differ from each other by the presence therein of a different vector.

15. A method according to claim 14, wherein said animal is a human.

16. Use of a vaccine composition comprising at least one antigen or a precursor thereof, and a vector, in a product

according to anyone of claims 1-13, or a method according to claim 14 or claim 15.

17. Use of an antigen, or a precursor thereof, for manufacturing a vaccine composition for vaccinating an animal or a human to obtain therein an immune response against said antigen, wherein said vaccine composition is administered sequentially with at least one other vaccine composition containing at least an immunogenic part, derivative and/or analogue of said antigen or antigen precursor, and a different vector.

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